

Construction of a Guide for Assessment and Physiotherapeutic Management of Pain in Cancer Patients

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Construction of a Guide for Assessment and Physiotherapeutic Management of Pain in Cancer Patients

Construção de um Guia para Avaliação e Manejo Fisioterapêutico da Dor em Pacientes com Câncer

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ABSTRACT

Introduction: Physiotherapy can contribute to control pain in cancer patients and educational strategies should be developed to increase physiotherapeutic actions in this context. **Objective:** To develop a guide for the assessment and physiotherapeutic management of cancer pain. **Method:** Study developed in three stages: 1. Descriptive analysis of sociodemographic, clinical, functional data, pain characteristics and physiotherapeutic treatments performed on cancer patients receiving palliative care; 2. Development of the preliminary version of the guide based on the results of the first stage and theoretical content; 3. Focus group formed by physiotherapists that resulted in the final version of the guide. **Results:** 62 patients were included, mainly females (69.3%). The most common tumor site was gynecological (25.8%) and half presented bone metastasis. Neuropathic pain (51.6%), located in the spine (29.0%) was the most prevalent type of pain. The physiotherapeutic treatments most used were: positioning (98.0%), kinesiotherapy (68.0%), walking (39.0%), orthoses (32.0%) and transcutaneous electrical nerve stimulation (21.0%). The focus group suggested changes and positively evaluated the preliminary version of the guide, highlighting that, in addition to an easy-to-understand language, it provided a comprehensive view of the methods for evaluating and physiotherapy treatment of pain. **Conclusion:** Knowledge of patients' characteristics, associated with literature data and the participation of expert professionals made it possible to create a guide developed to be objective and easy-to-understand for physiotherapists, containing several resources for assessment and physiotherapeutic management of pain in cancer patients.

Key words: Cancer Pain; Physical Therapy Modalities; Hospitalization; Neoplasms/epidemiology; Pain Management.

RESUMO

Introdução: A fisioterapia pode contribuir para o controle da dor em pacientes com câncer e estratégias educativas devem ser desenvolvidas para aumentar as ações fisioterapêuticas nesse contexto. **Objetivo:** Elaborar um guia para avaliação e manejo fisioterapêutico da dor no câncer. **Método:** Estudo desenvolvido em três etapas: 1. Análise descritiva de dados sociodemográficos, clínicos, funcionais, características da dor e tratamentos fisioterapêuticos realizados em pacientes com câncer em cuidados paliativos; 2. Desenvolvimento da versão preliminar do guia a partir dos resultados da primeira etapa e de conteúdo teórico na temática; 3. Realização de grupo focal composto por fisioterapeutas que originou a versão final do guia. **Resultados:** Foram incluídos 62 pacientes, principalmente do sexo feminino (69,3%). O sítio tumoral mais frequente foi o ginecológico (25,8%) e metade apresentou metástase óssea. O tipo de dor mais prevalente foi a neuropática (51,6%), localizada na coluna (29,0%). Os tratamentos fisioterapêuticos mais utilizados foram: posicionamento (98,0%), cinesioterapia (68,0%), deambulação (39,0%), uso de órteses (32,0%) e *transcutaneous electrical nerve stimulation* (21,0%). O grupo focal sugeriu alterações e avaliou positivamente a versão preliminar do guia, ressaltando que, além de ser elaborado com linguagem de fácil compreensão, possibilitou a visão integral sobre os métodos para avaliação e tratamento fisioterapêutico da dor. **Conclusão:** O conhecimento das características dos pacientes, associado aos dados de literatura e à participação de profissionais especialistas, possibilitou a construção de um guia que foi desenvolvido para ser objetivo e de fácil compreensão para fisioterapeutas, contendo diversos recursos para avaliação e manejo fisioterapêutico da dor em pacientes com câncer.

Palavras-chave: Dor do Câncer; Modalidades de Fisioterapia; Hospitalização; Neoplasias/epidemiologia; Manejo da Dor.

RESUMEN

Introducción: La fisioterapia puede contribuir al control del dolor en pacientes con cáncer y se deben desarrollar estrategias educativas para incrementar las acciones fisioterapêuticas en este contexto. **Objetivo:** Desarrollar una guía para la evaluación y manejo fisioterapêutico del dolor oncológico. **Método:** Estudio desarrollado en tres etapas: 1. Análisis descriptivo de datos sociodemográficos, clínicos, funcionales, características del dolor y tratamientos fisioterapêuticos realizados a pacientes con cáncer que reciben cuidados paliativos; 2. Elaboración de la versión preliminar de la guía con base en los resultados de la primera etapa y contenidos teóricos sobre el tema; 3. Realización de un grupo focal compuesto por fisioterapeutas que dio como resultado la versión final de la guía. **Resultados:** Se incluyeron 62 pacientes, principalmente mujeres (69,3%). La localización tumoral más frecuente fue ginecológica (25,8%) y la mitad presentó metástasis óseas. El tipo de dolor más prevalente fue el neuropático (51,6%), localizado en la columna (29,0%). Los tratamientos fisioterapêuticos más utilizados fueron: posicionamiento (98,0%), kinesioterapia (68,0%), marcha (39,0%), uso de órtesis (32,0%) y estimulación nerviosa eléctrica transcutánea (21,0%). El grupo focal sugirió cambios y evaluó positivamente la versión preliminar de la guía, destacando que, además de estar elaborada en un lenguaje fácil de entender, proporcionó una visión integral de los métodos de evaluación y tratamiento fisioterapêutico del dolor. **Conclusión:** El conocimiento de las características de los pacientes, asociado a los datos de la literatura y la participación de profesionales especialistas, permitió crear una guía desarrollada para ser objetiva y de fácil comprensión para los fisioterapeutas, que contiene diversos recursos para la evaluación y manejo fisioterapêutico del dolor en pacientes con cáncer.

Palabras clave: Dolor por Cáncer; Modalidades de Fisioterapia; Hospitalización; Neoplasias/epidemiología; Manejo del Dolor.

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INTRODUCTION

Pain in cancer is related to several factors and can be characterized as acute or chronic, according to physiopathological mechanisms. Moreover, it can be classified as nociceptive, neuropathic, and mixed, depending on the causal mechanism^{1,2}.

Nociceptive pain occurs due to the activation of high-threshold mechanoreceptors by increased mechanical forces. When the stimulus occurs in superficial nociceptors, it is called somatic nociceptive pain, which is generally constant, well located, worsens with movement, and alleviates with repose; may be caused by bone metastases and soft tissue tumor infiltration. When the stimulus occurs in deep nociceptors, it is called visceral nociceptive pain, which is poorly located or referred, characterized by constriction or pressure; may be caused by primary or metastatic abdominal tumors, and is intermittent, like cramps, with or without autonomic reactions (nausea, vomiting, sweating), as in cases of malignant bowel obstruction, for instance^{1,3-5}.

Neuropathic pain occurs as a consequence of direct nerve injury or abnormal nerve function at any point along the entire neuronal pathway, from tissues peripheral to the central nervous system, being caused by surgery, chemotherapy and radiotherapy, or even by tumoral invasion. Examples include polyneuropathy by chemotherapy or mononeuropathy by nerve plexus invasion. Pain can also be radiated when it appears in the nerve path where the stimulus occurs and can be referred when it appears in a location distant from where the stimulus occurs⁶⁻⁸.

Perception of pain is very personal and possesses physical, emotional, social, and spiritual components, characterizing the term as “total pain”. This symptom causes great emotional suffering, sadness, depression, existential pain, frustration and anger at the disease and its treatment, in addition to impacting functionality, independence in performing activities and quality of life related to health^{2,9,10}.

With the aim of controlling pain, reducing risk of functional complications, and facilitating daily living activities (DLA), it is imperative to perform individualized assessment of each patient and enforce a multidisciplinary approach. Due to the symptom’s subjective nature, its duration, cause, location, characteristics, type, intensity, and behavior must be considered. Pain control is done by use of medication and the association of non-pharmacological measures to the treatment may contribute to reducing medication use and, consequently, minimize the long-term side effects^{1,2}.

In this context, physiotherapeutic treatment is a non-pharmacological measure that uses physical resources to help control symptoms^{10,11}. However, scientific evidence

and technical bibliography that can guide physiotherapists’ practice in pain management of advanced cancer patients are scarce. Thus, the present study aims to elaborate a guide for physiotherapeutic evaluation and pain management in cancer patients.

METHOD

Study conducted in the hospitalization of *Hospital do Câncer IV* (HCIV), in the palliative care unit of the National Cancer Institute (INCA), located in Rio de Janeiro (RJ), Brazil, and approved by the institution’s Research Ethics Committee, report number 4.729.007, of May 24, 2021 (CAAE (submission for ethical review): 46226921.7.0000.5274), in compliance with Resolution 466/2012¹² of the National Health Council.

This study has been conducted in three stages, the first consisting of a quantitative approach; the second, in the development of a preliminary version of the guide; and the third stage consisted of a qualitative methodology.

FIRST STAGE

The quantitative stage involved a prospective cohort study of patients with advanced cancer, regardless of the tumoral location, from both sexes, who claimed to be in pain at the time of hospital admission, and that were hospitalized in the HCIV between June 2021 and April 2022 receiving physiotherapeutic care. According to the institutional routine, the first physiotherapeutic treatment happened 72 hours after hospitalization and patients were followed up until the seventh day of hospitalization.

Inclusion criteria were patients with age greater or equal to 18 years old, who presented pain addressed by physiotherapy care according to institutional routine at the moment of admission (excluding epigastric pain, headache, dysuria etc); had Karnofsky Performance Status (KPS) $\geq 30\%$; and accepted to participate and sign the Informed Consent Form (ICF). Patients who were not in clinical conditions (disorientation/consciousness level alteration, dyspnea, nausea/vomiting, bleeding) to participate or who presented difficulty in understanding the research’s questions were excluded.

Sociodemographic, clinical, and functional data, as well as information regarding pain characteristics and physiotherapeutic treatments conducted were collected and registered in a specific form by researchers trained in face-to-face interviews with patients by verification of medical records. The age, sex, primary tumor site, oncological illness progression, presence of bone metastasis and bone events, inherent aspects to pain and functionality variables refer to the baseline of the study, that is, the day the patient received their first physiotherapeutic treatment.

The diagnostic criteria of the International Association for the Study of Pain (IASP) were considered in pain assessment. The following were assessed: presence of pain during hospital admission or before hospitalization and duration of pain (previous to hospitalization); types of pain according to their physiopathological mechanism (somatic nociceptive, visceral nociceptive and mixed); and pain location [head, neck, chest, abdomen, pelvis, upper limbs (UL), lower limbs (LL), cervical spine, thoracic spine, lumbar spine and sacrum]. As to the symptom's characteristics described by the patient, pain was classified as spontaneous, incidental or caused by failure at the end of the therapeutic dose. During initial assessment, patients were asked about current or previous factors that, in their perspectives, have contributed to increase or reduce the symptom (lie down; change sleeping position; sit down; walk; deep breaths; or other) and pain intensity according to the verbal numerical rating (VNR), in which the patient attributed a score ranging from 0 to 10, with "0" being the absence of pain and "10" being the most intense pain possible. Thus, considering VNR, pain was classified as absent (0), light or low intensity (1 to 3), moderate (4 to 6) or intense (7 to 10)^{2,5}.

Functionality was assessed using the Karnofsky Performance Status (KPS) scale, which classifies individuals regarding their capacity of performing an active work, self-care and need for frequent medical care in face of greater evidence of the illness. This scale has 11 categories of 10% increments; a lower score indicates a worse functionality, thus, 100% indicates full capacity and 0% death¹³.

Moreover, considering the period between the first physiotherapeutic session up to the seventh day of hospitalization, the number of physiotherapeutic sessions and resources employed [superficial heat, cryotherapy, transcutaneous electrical nerve stimulation (TENS), motor kinesiotherapy, positioning, cushion adaptation, compression therapy, orthoses for skeletal stabilization, walking aids, walking, complementary integrative practices (CIPS), other resources]. Therefore, those were the only variables analyzed considering the seven-day follow-up in the cohort.

The analyses were performed using software SPSS¹⁴ version 20.0 (Statistical Package for the Social Sciences, Chicago, IL, USA). Continuous variables were described in mean and standard deviation or in median and interquartile range, while categorical variables were described in absolute and relative frequency.

SECOND STAGE

Based on the results of the first stage and the theoretical content arising from some selected references^{1,3,4,10,11,13,15-27}, the preliminary version of the guide was developed by a

physiotherapist with professional experience in the field (main author).

THIRD STAGE

The third stage that consisted of qualitative methodology relied on a focus group (FG) composed of physiotherapists to refine the preliminary proposition. This process originated the guide's final version, based on the construction of a collective view of reality regarding assessment and physiotherapeutic pain management in cancer patients²⁸.

The FG ran for about two hours according to literature recommendation and was composed of eight physiotherapists of INCA's four assistance units (HCI, HCII, HCIII and HCIV) experienced in treating pain in cancer patients, selected by convenience^{28,29}, who signed the ICF and were available at the date and location stipulated. The aim was to form a heterogeneous group regarding occupation areas in clinical and surgical oncology, in addition to palliative care.

The FG was in person and conducted by two researchers who recorded the content of the meeting. The meeting space was prepared to provide comfort, privacy and stimulate participation/interaction of participants.

The FG dynamic consisted of three phases. In the first phase, the participants were presented the profile of the patients identified in the first stage of the research. In the second phase, questions were used to contextualize the subject, addressing conceptions of cancer pain, if the profile of patients treated by the participants corresponded to the ones found in the study and forms of assessment and physiotherapeutic treatment of pain in the units. In the third phase, the preliminary version of the guide was revealed, leading to an open discussion of each item. The group consensus allowed the development and improvement of the guide's final version during the FG session through each participant's expression and argumentation.

RESULTS

FIRST STAGE

Sixty-two patients were assessed (Figure 1), most of whom were less than 60 years old ($n = 42$; 67.7%) and female ($n = 43$; 69.3%). The most frequent primary tumor site was gynecological ($n = 16$; 25.8%), followed by breast ($n = 10$; 16.1%), half the population investigated presented bone metastasis and 37.1% had a bone event (Table 1).

Mean pain duration was 61.4 ($\pm 5,7$) days, being neuropathic pain (51.6%) the most prevalent type. The most frequent location of pain was the spine (29.0%),

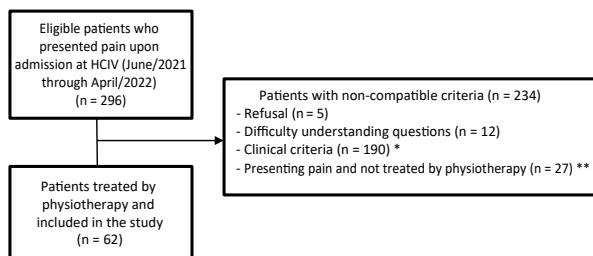


Figure 1. Flowchart showing selection of patients admitted to the palliative care unit with pain and followed up by the physiotherapy service (n = 62)

Source: Adapted from PRISMA 2020³⁰.

Captions: HCIV = Hospital do Câncer IV; n = number of observations.

*Disorientation/consciousness level alteration n = 156; dyspnea n = 12; nausea/vomiting n = 19; bleeding n = 3.

**epigastric pain n = 4; headache n = 7; dysuria n = 4; others n = 12.

Table 1. Characteristics of cancer patients admitted with pain to a palliative care unit (n = 62)

| Variables | Total n (%) |
|------------------------------------|-------------|
| Age (years) | |
| >60 | 20 (32.3) |
| <60 | 42 (67.7) |
| Sex | |
| Male | 19 (30.7) |
| Female | 43 (69.3) |
| Primary tumor site | |
| Gynecological ^a | 16 (25.8) |
| Breast | 10 (16.1) |
| Lung | 6 (9.7) |
| HN | 3 (4.8) |
| CBT | 5 (8.1) |
| GT ^b | 6 (9.7) |
| Prostate | 2 (3.2) |
| Others ^c | 14 (22.6) |
| Illness progression | |
| Local | 8 (12.9) |
| Locoregional and remote metastasis | 54 (87.1) |
| Bone metastasis | |
| No | 31 (50.0) |
| Yes | 31 (50.0) |
| Bone event | |
| No | 39 (62.9) |
| Yes | 23 (37.1) |

Captions: n = absolute frequency; % = relative frequency; HN = head and neck; CBT = connective bone tissue; GT = gastrointestinal tract.

^acervix and ovary; ^besophagus, stomach, bowel and rectum; ^ccentral nervous system, melanoma, non-melanoma skin, thyroid and others; ^dof these, 1 patient had hypercalcemia, 6 had pathological fracture and 21 had spinal cord compression syndrome.

followed by LL (22.6%), and intensity was identified as moderate to intense in 69.3% of patients. Sitting down (38.7%) was reported to increase symptoms the most,

while laying down (61,3%) reduced them. During the first physiotherapy assessment, median KPS was 40% (30%-40%) and VNR was 6 (3-8) (Table 2).

Table 2. Pain characteristics and functionality of cancer patients hospitalized with pain in a palliative care unit (n = 62)

| Variables | Total n (%) |
|--|-------------|
| Duration (days)^a | 61.4 (±5.7) |
| Pain type | |
| Neuropathic | 32 (51.6%) |
| Somatic nociceptive | 17 (27.4%) |
| Visceral nociceptive | 8 (12.9%) |
| Mixed | 5 (8.1%) |
| Pain location | |
| Spine ^b | 18 (29.0%) |
| LL | 14 (22.6%) |
| Abdomen | 9 (14.6%) |
| Chest | 8 (12.9%) |
| UL | 2 (3.2%) |
| Pelvis | 2 (3.2%) |
| Others | 9 (14.5%) |
| Pain intensity (VNR) | |
| Light | 19 (30.7%) |
| Moderate and intense | 43 (69.3%) |
| Characteristic | |
| Spontaneous | 32 (51.6%) |
| Incidental | 24 (38.7%) |
| End of dose | 6 (9.7%) |
| Factors that worsen pain^c | |
| Sitting down | 24 (38.7%) |
| Walking | 18 (29.0%) |
| Changing sleeping position | 16 (25.8%) |
| Laying down | 5 (8.1%) |
| Deep breath | 1 (1.6%) |
| Others | 7 (11.3%) |
| Factors that improve pain^c | |
| Laying down | 38 (61.3%) |
| Sitting down | 2 (3.2%) |
| Changing sleeping position | 1 (1.6%) |
| Others | 5 (8.1%) |
| Not informed | 16 (25.8%) |
| Total number of physiotherapy sessions during hospitalization^d | 3 (2-4) |
| KPS (%) at 1st physiotherapy appointment^d | 40 (30-40) |
| VNR at 1st physiotherapy appointment^d | 6 (3-8) |

Captions: n = absolute frequency; % = relative frequency; LL = lower limbs; UL = upper limbs; KPS = Karnofsky Performance Status; VNR = verbal numerical rating.

^amean and standard deviation; ^bcervical spine + thoracic spine + lumbar spine; ^cpossibility of more than one answer per patient; ^dmedian and interquartile range.

Figure 2 describes the prevalence of physiotherapeutic treatments offered to patients with pain up to the seventh day of hospitalization. Most frequently used resources were positioning (98.0%), followed by motor kinesiotherapy (68.0%), walking (39.0%), orthosis for skeletal stabilization (32.0%) and TENS (21.0%).

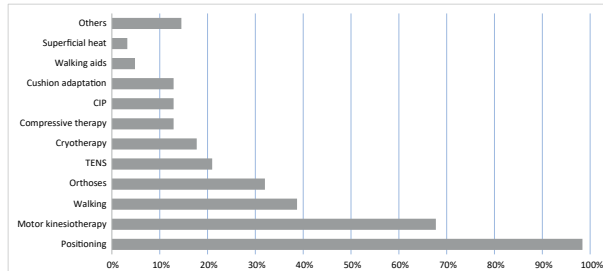


Figure 2. Prevalence of physiotherapeutic treatments offered to cancer patients with pain that were admitted to a palliative care unit (n = 62)

Captions: CIP = Complementary integrative practices; TENS = transcutaneous electrical nerve stimulation.

SECOND STAGE

The preliminary version of the guide was titled: “Physiotherapeutic guide for assessment and oncological pain management for patients in palliative care”. Its content is presented in Chart 1.

THIRD STAGE

Of the eight physiotherapists in the FG aged between 39 and 57, six were females. As to their academic qualifications, one had a PhD, two had doctoral degrees, two had master’s degrees and three had specialization degrees (data not shown in the table).

During the FG, participants positively evaluated the preliminary version of the guide. They appreciated the decision to elaborate a didactic resource based on profile description of hospitalized cancer patients in pain, on available literature and the participation of experienced professionals in treating the symptom. In their evaluation, the guide was written using easy-to-understand language, offering an integral view over the methods for assessing treatment and symptom, presenting foundations for physiotherapeutic action in pain management in diverse environments. The following alterations were suggested:

In the item “Oncological pain”, FG suggested to include a definition of pain to later describe its main causes. They also suggested adding that cancer patients may present pain not only related to the disease and treatment, but also to other issues, like immobility, muscle weakness, musculoskeletal or metabolic abnormalities, among others. Considering the aforementioned, a consensus to use the term pain in cancer was reached, in addition to highlighting the need for observing signs and

Chart 1. Content of the guide’s preliminary version

| ITEM | DESCRIPTION |
|---|--|
| Introduction | Guide presentation, objective description, and approaches towards content development. |
| Oncological pain | <ul style="list-style-type: none"> - What is oncological pain? - How does it occur? - How does oncological pain is classified and what are its types? - How is it diagnosed? - How is it treated? |
| Physiotherapy in patients with oncological pain: Assessment | <ul style="list-style-type: none"> - Pain assessment - Functional assessment |
| Physiotherapy in patients with oncological pain: Interventions | <ul style="list-style-type: none"> - Adequate positioning and cushion adaptations for positioning - Motor kinesiotherapy - Walking - Orthoses and walking aid devices - TENS - Cryotherapy - Compression therapy - CIP - Superficial heat - Manual therapeutic resources - Photobiomodulation - Taping |
| Bibliographical References | Presents the references used in the guide |

Captions: TENS = transcutaneous nervous electrical stimulation; CIP = complementary integrative practices.

symptoms, performing physical assessments and review of complementary exams.

Regarding the “Physiotherapy in patients with oncological pain: Assessment” item, the main suggestions were to include information regarding the need for daily assessment, understanding the patients’ functionality history and adequate use of pain ratings by professionals.

Regarding the “Physiotherapy in patients with oncological pain: Interventions” item, the suggestion was to highlight the information that pain treatment must be a priority. Moreover, some limitations and precautions regarding the described techniques should be included. Such techniques and their details were included in the final version of the guide that can be fully accessed at: <https://search.bvsalud.org/gim/resource/pt/biblio-1509620>

DISCUSSION

This study allowed the development of an important instrument based on the association of three key elements: characteristics of advanced cancer patients who present pain; theoretical content related to the theme; and the expertise of physiotherapists who treat cancer pain in a national reference institute.

Cancer pain occurs due to a real or potential tissue lesion, that may be related to the tumor and its metastases, to the oncological treatment, and several other diverse conditions, such as immobility, muscle weakness, pressure-induced lesions, among others^{3,4,16}. Literature describes how difficult it is to reach pain management in cancer patients, that many factors influence the development of chronic pain and that there is no difference in the prevalence of pain in patients undergoing antineoplastic treatment and those in advanced stages of the illness¹⁸. It is further described that patients with advanced cancer in palliative care feel constant pain with no improvement periods, in addition to being submitted to inadequate pain treatment with the use of medication⁷. These findings corroborate the results of this study that showed a long symptom duration characterized by a mean of 61.4 days.

Neuropathic pain was observed to be the most prevalent (51.6%) in this proposal and assessed following IASP diagnostic criteria. A study by Satija et al.³¹ conducted with cancer patients in palliative care followed on an outpatient basis in three India hospitals demonstrated similar prevalence of this type of pain (54%), assessed using the Leeds Assessment of Neuropathic Symptoms and Signs (S-LANSS). Couceiro et al.⁸ identified a neuropathic pain prevalence of 53%, according to the *Douleur Neuropathique en 4 questions* (DN-4), in patients undergoing oncological treatment. A systematic review conducted by Roberto et al.³² demonstrated that about a third of cancer patients

suffers from neuropathic pain, being a frequent condition in advanced stages of the illness.

Belayneh et al.³³ used the IASP diagnostic criteria and obtained a neuropathic pain frequency of 24.9% among patients with advanced cancer in 11 Canada centers, clinics, hospitals, and home care. Another study⁷ that used the PAINDETECT questionnaire observed that 33% of the population in oncological treatment presented this pain type and concluded it to be difficult to control even when treated with opioids, highlighting the importance of multidisciplinary follow-up in addressing the symptoms. Neuropathic pain diagnose is difficult and the differences found in the studies may be justified by the fact they were conducted in diverse situations with the use of different tools to identify the symptom.

Among the assessed patients, 69.3% reported having moderate or intense pain. As the oncological disease progresses, symptoms like pain emerge as the most prevalent, intense, and distressing, regardless of the tumoral type and clinical context³⁴. Other studies^{33,35,36} demonstrated high pain intensity in their findings and difficulty controlling the symptom. Belayneh et al.³³ found moderate to intense pain in 61.7% of cancer patients in palliative care. Allende-Perez et al.³⁵ observed that 65% of patients presented some pain intensity and that 40% showed moderate or intense pain. Lima et al.³⁶ assessed patients with advanced cancer in specific and palliative oncological treatment and verified that 70.7% of them were not under pain control upon hospitalization and that neuropathic pain was the hardest to manage.

This study showed that bed positioning and motor kinesiotherapy were the most offered physiotherapeutic treatments to patients in pain. In face of frequent functional commitment, claims of spontaneous pain and that laying down reduces pain the most according to the assessed patients, these physiotherapeutic treatments may contribute to control pain in these conditions and maintain functionality¹⁰.

A systematic review showed that physical exercise seems to be an effective procedure that should be recommended to patients with advanced cancer to improve physical function, but only 25% of the reviewed studies claimed that pain decreased in response to the exercise³⁷. Lee et al.³⁸ highlight that the use of physical modalities, painkillers, injection therapy and exercise may reduce pain and the use of opioids, in addition to improving physical activity and quality of life. In bone metastases and bone events cases, orthoses and analgesic resources are used in patients in pain^{2,11,39}. Thus, these findings regarding the resources adopted are in line with the literature.

The experience of developing this guide, allying research results to theoretical content and professional

experience of the participants involved showed this to be a viable process that can be applied in the elaboration of educational content aimed at health professionals' education and further improvement, allowing the content to be adapted according to suggestions. The available literature on the theme which served as foundation for the initial content creation allowed the authors to add resources to the guide that were not mentioned in the first stage of the study, even not being employed due to being unavailable in the institution, and the FG was the chosen method for perfecting the content by valuing the opinion and perception of the subjects involved, allowing the participants to contribute with their individual perception in equal opportunities to create a collective reason^{28,40}. This stage was key considering the different levels of training and working of the included professionals, in addition to covering conditions that had not been previously addressed in the initial version.

The inclusion of professionals in this process promoted constructive criticism, to meet the expectations of employees who may have different knowledge and interests from those who prepare the material, as observed by Echer⁴¹ regarding the recommendation of integrating different professionals on the production of educational material. It was possible to see that the contribution to create the guide was meaningful for these professionals, as they certainly believe in its potential and would adopt it as a supporting instrument for their professional activities.

In regard to some of the main considerations of the FG regarding literature, participants highlighted the understanding of pain as a complex phenomenon that must be addressed urgently by a multidisciplinary team, using pharmacological and non-pharmacological measures, including physiotherapy to treat the symptom. The need for frequent reassessments, documenting functional commitment and treatments that contribute to planning adequate measures was highlighted, as the pain and clinical status of these patients may change rapidly^{2,10}.

The lack of adequate records on pain at the moment of assessment can frequently lead to underdiagnosis and undertreatment. The use of pain ratings and scales to characterize the intensity of the patient's physical discomfort and their functional commitment was valued as they help professionals to standardize assessment and facilitate understanding by patients regarding the symptom's intensity and impacts to their physical condition. Care teams should be mindful of establishing clear communication channels for every symptom classification, given its progressive, individual, and multidimensional character, especially in patients with advanced cancer.

The creation of this guide aimed to promote a tool for treating pain in cancer patients and serving as a resource

for instructing physiotherapists. It was intended to be an asset widely used by professionals working in oncology, especially in palliative care. To achieve this objective, this guide will be widely available in a virtual environment. Finally, it is important to highlight how important this process was, for, in addition to creating a guiding instrument for professional practice based on patients' profile and the perspective of specialists in the field, it also allowed a reflection about the institutional work processes, offering a space of knowledge exchange, a real space of permanent education⁴².

A possible limitation would have been the development of a content based solely on professional experience, which could result in a guide with compromised biases. However, this limitation was reduced by the second stage of the study, which created a preliminary version of the guide based on specialized literature. The choice of experienced professionals in the treatment of people with cancer with different backgrounds and professional activity also reduced this limitation. The strengths of this study lie on the fact that it was developed in an oncological national reference treatment institution, and that this guide can be used by professionals who provide physiotherapeutic assistance to patients with cancer in different situations and complexity levels, such as general hospitals, clinics, or home care facilities.

CONCLUSION

Knowledge of pain characteristics, functionality and physiotherapeutic treatments used allowed for a better understanding of the population of patients with cancer and pain. The association of these data with the content in the available literature aligned to the expertise of professionals who contributed to the FG, in a process permeated by participative strategy, made possible the creation of a guide formed by different resources for assessment and physiotherapeutic pain management in cancer. The guide was developed to be objective and easy to understand by physiotherapists and thus contribute for planning adequate assistance in controlling the symptom.

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CONTRIBUTIONS

All the authors contributed substantially to every stage of the manuscript and approved the final version to be published.

DECLARATION OF CONFLICT OF INTERESTS

The author Anke Bergmann declares a potential conflict of interests due to her being the scientific editor of INCA's Revista Brasileira de Cancerologia. The other authors do not have any conflict of interests.

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